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Influences on Sponsorship Deals in NASCAR: Indirect Evidence from Time on Camera

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ABSTRACT:

Corporate sponsorship plays an important role in the entertainment business. The question becomes: what influences the value of a sponsorship contract? Empirical analysis of this question is relatively limited because of a lack of complete data on contract values. This is especially true in NASCAR where sponsorship values are generally not released to the public. We analyze a proportional proxy for driver sponsorship value: the value of time on camera. We find that the value of time on camera is influenced by driver performance but also by their experience and, in the case of two drivers, their family name-brand capital. The results confirm that sponsorship value in NASCAR is not only determined by what a driver has done most recently but, to some extent, what their fathers had done before them.

KEY WORDS: Sports, Sponsorship, NASCAR, Naming Rights, Return on Investment, Advertising

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I. Introduction

Corporations have long dedicated advertising dollars to naming rights for stadiums and events, official sponsorship of Olympics teams and games, placement of corporate logos on athlete's jerseys, hats, and equipment, and in hiring athletes as spokespeople for their products. What characteristics influence the value of a team or an athlete to potential sponsors? Unfortunately, the empirical analysis of sponsorship deals is rather scant, primarily because of a lack of sufficient data conducive to testing how sponsorship values are determined. Yet, because the goal of advertising is to maximize return on investment (ROI) knowing how various athlete or team characteristics influence ROI is an important question.

Unfortunately, the value of sponsorship deals is often not announced in detail, leaving a sense of ambiguity about what is truly valued by sponsors (and the audience toward which the sponsorship deal is directed). Using a unique data set describing the value of each NASCAR driver's time-on-camera over the course of the race season, we investigate which driver characteristics enhance the value of time-on-camera. By extension, if the ROI of NASCAR sponsorships equilibrate across drivers, those characteristics that enhance value of time-on-camera also enhance the value of sponsorships.

To investigate what causes a driver to be mentioned or seen on air more often during the course of the season, we focus on performance variables, such as laps led and race results, as well as driver attributes. Because the television broadcast wishes to maximize audience size (ceteris paribus), any differences in time-on-camera not

associated with driver performance would ostensibly reflect the preferences (*writ large)* of the audience.

To the extent that some drivers are more popular than others, independent of ability, economic theory would predict that more popular drivers would try to monetize their popularity through their sponsorship contracts. However, there are two limitations to the extent that a driver can monetize a non-performance-based attribute. First, the value of time-on-camera is a proportional proxy for advertising dollars spent on actual advertisements, which puts a constraint on how much a driver can expect a sponsor to pay. To the extent that the proportionality between value of time-on-camera and value of actual advertisements differ across potential sponsors, the driver would expect to sign with a single sponsor that values them the most. However, the competition between sponsors for a particular athlete would be tempered by the potential ROI of signing with another driver or by pursuing alternative marketing efforts beyond the sport of NASCAR. This outside competition would tend to drive the ROI in sponsorship contracts to parity, in the absence of transaction costs and other contractual limitations.

The International Events Group (IEG) says “Billions of dollars worth of spending that formerly went to conventional media will be put behind sponsorship” (IEG Sponsorship Report 2006). As these sponsorship dollars grow, so does the value of knowing how to use sponsorship dollars effectively. In the next section we discuss the economic literature as well as the related literature from both finance and marketing. In the third section we provide details on the data, in the fourth section the methodology, and the results in the fifth section. The last section concludes with discussion of the value of corporate sponsorship and sports.

II. Literature of Superstars

Both the finance and marketing literature have attempted to measure the benefit and effectiveness of corporate sponsorship dollars. In the finance literature, event studies have found a positive relation between athletic sponsorship and stock prices. Cornwell, Pruitt, and Clark (2005) find that sponsorship in the National Basketball Association (NBA), Major League Baseball (MLB), the National Hockey League (NHL) and the Professional Golfers Association (PGA) all increased the stock prices of the sponsoring firms. Pruitt, Cornwell and Clark (2004) also find that announcement of sponsorship of a NASCAR team increases the sponsoring company's stock price. Mahar, Paul, and Stone (2005) find that NASCAR sponsors that sell directly to end consumers have a positive relationship between winning and sponsors stock price; however, this does not hold for firms that market to businesses. Durr, Eaton and Broker (2009) find that a portfolio of corporations that sponsor NASCAR teams consistently outperforms the risk adjusted returns of the S&P 500. They claim that NASCAR sponsorship sends a signal of a firm's financial health.

Event studies have also found a relationship between athlete image and stock prices. For instance during the Tiger Woods scandal in 2009, his sports-related sponsors' stock value decreased by over four percent and his top five sponsors stock prices fell by two to three percent (Knittel and Stango 2010).

The marketing literature further explores the role of corporate sponsorship in individual purchase decisions. In this literature corporate sponsorship is defined as a firm's provision of assistance, either financial or in kind, to an activity (e.g., sport, musical event, festival, or arts) for achieving commercial objectives (Meenaghan 1991).

The marketing literature suggests that the primary objective of sponsorship is to enhance brand loyalty and recognition and ultimately influence purchase decisions (Sirgy et al 2007). Gwinner (1997) suggests corporate dollars are used to transfer the image of the event to the product or the company. Amato, Peters, and Shao (2005) find that self-indentified hardcore and moderate fans of NASCAR are more likely to know about and purchase products from NASCAR sponsors. In addition they find that the decision to support a particular driver is independent of the sponsor but once a fan supports a driver they are more likely to buy the product of the driver's sponsor.

To maximize this ROI, sponsors seek those athletes who are going to maximize the exposure of the sponsor or the sponsor's product. One method to do this is for the athlete to maximize their exposure to the sport's audience. Because small differences in talent can translate into large differences in earnings (Adler 1985), the ability to separate the superstars from the pack is highly valued. Yet, determining the differences that separate superstar talent has proven difficult (Kruger 2005). Knowing that multiple mediocre performances do not add up to the quality found in one great performance (Rosen 1981) magnifies the importance of finding these superstars. Hamlen (1991, 1994) and Kruger (2005) analyze this in vocal musical talent and Franck and Nüesch (2010) analyze both talent and popularity in German soccer to see what it takes to be a superstar. We extend this literature by analyzing NASCAR drivers.

III. NASCAR Teams, NASCAR Drivers, and Corporate Sponsorship

Corporate sponsorship has a long history in NASCAR; in 1971 Junior Johnson approached R. J. Reynolds Tobacco Company (RJR) with an idea of sponsoring his race

car for the NASCAR circuit. RJR, realizing the attendees of NASCAR races were a desirable demographic for their product, agreed and sponsored his car for approximately $100,000. This started the modern era of corporate sponsorship in NASCAR. It was also during this time that Ford Motor Co. and General Motors Corp. coined “Win on Sunday; Sell on Monday” as their advertising catch-phrase. From this point forward corporate sponsorship became crucial to the funding of NASCAR race teams.

Funding a racing team is a multimillion-dollar undertaking (McGee 2005) and, for a typical NASCAR team, sponsorship contracts are the primary source of their funding (Gage 2006). According to Brown (2008), top NASCAR sponsorship deals are usually around $20 million for the Sprint Cup series, the highest circuit in NASCAR. Thus, knowing what makes a particular driver more popular with the audience and therefore more valuable to the sponsors is important for NASCAR teams, NASCAR drivers, and for the sponsors themselves. However, the actual values of sponsorship deals are generally not reported and have not been compiled in sufficient numbers to facilitate statistical analysis.

Naturally, during and immediately after a particular race, there is considerable focus on the drivers who contended for winning the race, with the greatest focus often falling on the driver who won or, at times, the driver who came in second place. This suggests that the value of time-on-camera is positively correlated with contending and winning races. However, Groothuis and Groothuis (2008) suggest that there may be a number of other reasons that a driver is shown on the television broadcast other than their position in the race. One reason is that brand-name capital is established through driver experience. This driver brand-name capital is reflected in fan popularity, which manifests

itself as a preference for seeing that driver during the race regardless of their running position. While driver name-brand capital might be generated by the driver's own actions, it is also possible that part of a driver's name-brand capital is inherited from previous drivers within the same family, i.e., fathers, grandfathers, uncles, and brothers.[2] This occurs when a driver's name becomes its own brand, e.g., Earnhardt, Petty, or Busch (to name a few).[3] The empirical analysis also tests for whether driver name-brand capital is reflected in the value of time-on-camera and, by extension, is valuable to sponsors.

A proportional proxy for sponsorship value is the value of time-on-camera. Time-on-camera (TOC) is the dollar value of television exposure, calculated as the product of the total 'clear and in focus exposure time' of a driver during a race and the non-discounted cost a commercial run during that specific race. The value of TOC is defined by Joyce Julius as:

> "All clear and in-focus exposure time a brand receives during the broadcast. In order for the brand's logo to be considered clear and in-focus, the image must not be blurred or obstructed in a way as to prevent the typical viewer from acknowledging the brand. Along with the visual exposure, Joyce Julius also monitors each verbal mention received by the brand throughout the telecast. Mentions are valued at ten seconds each, based on an average of 3 brand mentions per 30-second commercial. Once all of the visual and/or verbal exposure has been tabulated, a value for the brand's exposure is calculated by comparing the on-screen time and mentions to the non-discounted cost of a commercial, which ran during the specific program in question" (Joyce Julius and Associates).[4]

[2] This comes from Laband and Lentz's (1985) work finding that occupational following is an efficient mechanism for the transfer of rents across generation, especially when the family name has goodwill attached to it.

[3] For those not familiar with these last names, Dale Earnhardt, Jr. is the son of the late Dale Earnhardt, who died on the last lap of the 2001 Daytona Five Hundred, and is the most popular driver in NASCAR. The Petty name has been associated with NASCAR since Lee Petty started racing in 1949; in 2008 Kyle Petty was the last Petty to race in NASCAR's premier circuit. Kyle Busch and Kurt Busch are brothers who race in NASCAR's premier circuit; Kurt was the 2004 champion of the NASCAR Sprint Cup and Kyle is a controversial but high quality driver.

[4] Joyce Julius & Associates, Inc founded in 1985 measures sponsorship impact in media. The website for this company is http://www.joycejulius.com/index.html .

Joyce Julius and Associates calculate this measure for each driver during each race. We obtained the aggregate value of time-on-camera for the entire season for each driver. These data are matched to driver performance and individual characteristics.

In Table 1 the 12 drivers who, over the seven seasons of the sample period, had TOC values of more than $100 million per season are reported. During the 2001 through 2007 seasons, Dale Earnhardt Jr. had the highest TOC of all drivers for each season, with a maximum TOC of approximately $190 million in 2003. The mean TOC of all drivers is $38.6 million dollars while the median TOC is $26 million dollars; thus the distribution of TOC values is skewed towards superstars. The twelve drivers listed in Table 1 are clearly in the right tail of a skewed distribution of TOC; each have a value that is at least two standard deviations above the mean.

While the TOC across drivers is skewed, there is little reason to suspect that the ROI across drivers is similarly skewed. This is because relatively low ROIs in NASCAR sponsorship would motivate sponsors to move their sponsorship dollars to other sports. Moreover, as drivers and teams understand the popularity of a driver and extract higher sponsorship fees from sponsors, the ROI will naturally decline. In equilibrium, the ROI should be equal across all drivers in NASCAR and all alternative marketing avenues. Therefore, as the TOC is skewed but ROI is not, it is anticipated that the value of sponsorships will also be skewed toward superstars. Yet what influences the superstar status?

[Table 1]

IV. Methodology

The sample includes data on all Sprint Cup (formally Winston Cup) drivers from 2000-2007. Descriptive statistics are reported in Table 2. The monetized TOC of all drivers averaged $38.6m during the sample period, with a minimum of $17,500 and a maximum of approximately $190 million. Driver performance is measured in a number of ways. An obvious performance measure is how many races the driver won over the course of the season. The average number of wins across all drivers in a given season is approximately one, but there are a large number of drivers who never win a race and several drivers who win multiple races in a given season, e.g., Jimmie Johnson won ten races in 2007. Because contending for a race win is often an important contribution to the drama of the television broadcast, we identify the number of times each driver finished in the second through fifth and sixth through tenth positions over the course of the season.

Other performance measures include the number of times a driver did not finish a race (DNF), distinguishing DNFs caused by a crash and those caused by mechanical failure, the total number of races in which each driver participated during the course of the season, and the total laps led during the course of the season.[5]

Across all drivers, the average number of DNFs was approximately five with less than three being caused by wrecks. We distinguish between the two types of DNFs because they might have different impacts on a driver's TOC. Wrecks are often replayed during and after a race broadcast and therefore might increase the TOC relative to mechanical failures, after which a car is taken off the track but with no compelling reason

[5] While the most famous drivers in NASCAR's Sprint Cup Series generally drive every race several drivers attempt but do not qualify for each race.

to replay the mechanical failure. Thus, it is anticipated that DNFs caused by wrecks increase TOC relative to DNFs caused by mechanical failure.

It is anticipated that the number of races in which a driver participates increases TOC and that the more laps led during the course of a season the greater the driver's TOC, all else equal. The average driver started approximately 33 of the 36 races in a given season, although there are a large number of drivers who participate in every race and several who participate in only a few races (minimum of four). It is also anticipated that the more laps led over the course of the season the greater a driver's TOC. The average driver led just over 270 laps during the season.

However, TOC might not be determined by driver performance alone. As witnessed by the high TOC value for Dale Earnhardt, Jr., there might be additional factors that contribute to a driver's TOC value and thus to the driver's ability to extract greater sponsorship fees. As discussed, two issues that might contribute to a driver's name-brand capital, and hence his popularity, is the driver's years of racing in NASCAR's premier circuit and any familial connections.

Consider the following empirical model:

$$Value_{it} = \beta_0 + \beta_1 Win_{it} + \beta_2 (Finish\ 2-5)_{it} + \beta_3 (Finish\ 6-10)_{it} + \beta_4 DNF_{it} + \beta_5 Crash_{it} + \beta_6 Races_{it} + \beta_7 Laps\ Led_{it} + \gamma X_{it} + \theta N_{it} + \varphi Year_{it} + \varepsilon_{it} \quad (1)$$

where the β's are parameters to be estimated and ε is a zero-mean error term.

The dependent variable, VALUE, is the value of TOC for each driver *i* in year *t*. The *X* vector includes driver experience and experience squared, to control for any non-linearities, and, following Groothius and Groothius (2008), the *N* vector contains dummy variables that describe any familial connections of a driver to other NASCAR drivers.

The vector YEAR contains dummy variables for the various years in the sample to control for any secular changes in TOC values.

[Table 2]

V. Empirical Results

In Table 3, we report the results of the empirical model described in the previous section. Model 1 in the second column includes total laps led whereas Model 2, displayed in column three, does not. Focusing first on Model 1, winning a race does not necessarily lead to a huge increase in the value of TOC. This might occur if the driver came from the middle of the pack late in the race to win a race, or the race ended during a red flag (during which the cars are not in motion around the track). In Model 1, finishing second through fifth and finishing sixth through tenth are both statistically significant and positively correlated with TOC. Furthermore, finishing in the top five is worth more than finishing sixth through tenth, consistent with tournament theory. Surprisingly, neither the total non-crash DNFs nor the crash-related DNFs influence the value of TOC, although the parameter on non-crash DNFs is negative and that on crash DNFs is positive. However, using a one-tailed test, the parameter on non-crash DNFs is negative (as expected) at the 10% level whereas that on crash-related DNFs is not distinguishable from zero, offering some support to the intuition that non-crash related DNFs reduce value of TOC relative to crash-related DNFs.

The total number of laps led is positively related to the value of TOC, as expected; for each lap led the value of TOC increased by $26,030. Driver experience is also a positive contribution to the value of TOC; for every year of experience the driver's

value of TOC increases by $1.65 million, although at a decreasing rate. The average driver who moves from 4 to 5 years of experience would enjoy an increase in value of TOC of approximately $1.0 million, whereas the average driver who moves from 10 to 11 years of experience would enjoy an increase of approximately $168,000. The value of experience peaks in a driver's twelfth year of experience at $9.6 million dollars, ceteris paribus. The evidence in Model 1 supports Groothuis and Groothuis (2008) in that name-brand capital seems to transfer within a family. Being the son of a former driver increases a driver's season-long value of TOC by 33.2 million dollars while being a brother is found to be insignificant.

Model 2 in Table 3 drops the total laps led. In this model, the vast majority of the parameter estimates do not change in magnitude or statistical significance. However, in Model 2 the importance of finishing first is now clear. The parameter on winning is approximately $6.2 million in value of TOC and is statistically significant; while finishing second through fifth provides $2.51 million in value and finishing sixth through tenth provides $1.69 million dollars of value. These results follow a tournament payment structure.

[Table 3]

While there is a strong influence of being the son of a former (or current) NASCAR driver on the value of TOC, this result might be driven by only one or two individual drivers. As shown in Table 1, Dale Earnhardt Jr. had the highest value of TOC during each of the seven years of the sample and is the son of the late Dale Earnhardt Sr., who lost his life in a crash during the last lap of the 2001 Daytona 500. Dale Earnhardt Sr., nicknamed "The Intimidator," was among the five first inductees to the NASCAR

Hall of Fame, won seven championships and seventy-six races, and was one of the most popular drivers in the sport. Dale Sr.'s brand-name capital is clearly a potential contributing factor to his son's popularity, which introduces the possibility that the findings in Table 3 are not externally valid.[6] To test whether this is the case, in Table 4 we independently control for each driver show is a son of a previous NASCAR driver.

[Table 4]

When controlling for each son individually, winning races becomes significant when controlling for laps lead, which remains significant. Finishing first, second through fifth, and sixth through tenth are all positive contributors to the value of TOC and continue to follow tournament structure. The parameters on the number of DNFs, both crash-related and non-crash related, are not statistically significant. Experience is still a positive contributor to the value of TOC but at a declining rate. Of the sons in the sample analyzed here, only Dale Earnhardt Jr. and Dale Jarrett, whose father was Ned Jarrett a former NASCAR champion, received a positive and statistically significant increase in their value of TOC; all other sons in the sample received no significant increase (or decrease) based on their name-brand capital. Our results suggest that brand name capital does not transfer except when their father is a superstar driver.

VI. Conclusion

When corporate sponsors want to maximize their exposure, they often focus sponsorship dollars on events, teams, and athletes that will prove to be reliable, respectable, and, most important, repetitive advertising outlets. However, what attributes

[6] Dale Earnhardt, Jr. has won a total of 18 NASCAR Sprint Cup Series races in his career but only three races from 2005 through the (middle) of the 2011 season and none since the 2008 season. Nevertheless, he remains one of the most popular drivers in the circuit.

of athletes are desirable to the audience and therefore are of value to potential sponsors? Using a unique dataset describing the value of time on camera in NASCAR's premier circuit, the Sprint Cup, we are able to analyze what factors increase a driver's exposure during the television broadcast and therefore increase the value of the driver to the sponsor. Given the competitive nature of the sponsorship market, the attributes that are valuable to the audience and thus to sponsors are exactly those attributes drivers would use to extract higher sponsorship fees.

In many sports the primary focus is on winning the season-long championship, which is, in turn, highly correlated with winning percentage over the course of the season. In NASCAR winning is not necessarily everything. While, on average, winning a race will contribute to a driver's value of time on camera, other driver attributes matter as much if not more. The evidence suggests that leading laps, more experience, finishing races, and, most importantly, being a son of a previous driver, all contribute to a driver's value of time on camera.

However, the ability to transfer family name-brand capital from one generation to another is not automatic. In our sample we find that only Dale Earnhardt Jr. and Dale Jarrett were able to monetize their last-name brand capital in the form of additional value of time on camera, above and beyond their performance statistics. This suggests that both drivers would have been able to extract higher sponsorship fees because of their family name.

Table 1: Drivers with Season-long Value of Time on Camera Greater than $100 million (2000-2007)

Driver	Value	Year
Dale Earnhardt Jr.	$189,946,510	2003
Dale Earnhardt Jr.	$183,895,715	2004
Dale Earnhardt Jr.	$183,069,490	2006
Dale Earnhardt Jr.	$178,173,950	2007
Dale Earnhardt Jr.	$166,404,630	2002
Dale Earnhardt Jr.	$165,594,185	2001
Jimmie Johnson	$164,078,100	2007
Dale Earnhardt Jr.	$148,959,580	2005
Jimmie Johnson	$143,620,695	2006
Jimmie Johnson	$140,236,910	2005
Jeff Gordon	$136,437,390	2001
Kevin Harvick	$130,991,580	2007
Tony Stewart	$125,006,350	2005
Jeff Gordon	$122,727,500	2007
Jimmie Johnson	$121,885,155	2004
Jeff Burton	$116,577,900	2006
Jeff Burton	$105,781,765	2007
Michael Waltrip	$105,483,020	2005
Ricky Rudd	$105,399,625	2001
Dale Jarrett	$105,108,475	2001
Tony Stewart	$104,221,200	2007
Greg Biffle	$103,124,440	2006
Rusty Wallace	$102,496,005	2001
Greg Biffle	$100,440,115	2005

Table 2: Summary Statistics of Data Used in the Study

Variable	Mean	Std. Dev.	Min	Max
Value of TOC	3.88E+07	3.70E+07	17500	1.90E+08
Total Finish 1	0.921569	1.593139	0	10
Total Finish 2-5	4.493464	4.980778	0	20
Total Finish 6-10	4.392157	3.409217	0	15
Total Finish Other	23.05229	8.110945	1	36
Total DNF Non-Crash	2.189542	1.937555	0	15
Total DNF Crash	2.712418	1.857808	0	9
Total Laps Led	271.634	378.0185	0	2320
Experience	10.95752	8.338032	1	33
Son (1=Yes)	0.114379	0.318793	0	1

N=306

Table 3: Determinants of Value of Time on Camera

VARIABLES	Model 1: Value	Model 2: Value
Total Finish 1	2.86064e+06 (0.237)	6.18589e+06*** (0.000)
Total Finish 2-5	1.78219e+06*** (0.002)	2.50738e+06*** (0.000)
Total Finish 6-10	1.47690e+06*** (0.004)	1.68643e+06*** (0.002)
Other Finish	225187.27573 (0.227)	195567.78984 (0.297)
Total DNF Non-Crash	-1.13560e+06 (0.119)	-1.03447e+06 (0.171)
Total DNF Crash	424167.18648 (0.622)	482255.14218 (0.572)
Total Laps Led	26,030.88922** (0.011)	
Experience	1.64894e+06*** (0.010)	1.69320e+06*** (0.008)
Experience Squared	-70522.25533*** (0.001)	-72433.09138*** (0.001)
Son	3.31937e+07*** (0.000)	3.29938e+07*** (0.000)
Brother	2.44453e+06 (0.477)	2.28888e+06 (0.515)
Year Fixed Effects	Yes	Yes
Constant	-1.68032e+07** (0.034)	-1.64713e+07** (0.042)
H_0: Homoscedasticity	89.83***	98.52***
Observations	305	305
R-squared	0.573	0.557
Robust p-values in parentheses. Test for heteroscedasticity is a Cook-Weisberg test distributed Chi-squared with one degree of freedom. *** p<0.01, ** p<0.05, * p<0.1		

Table 4: Determinants of Value of Time on Camera with Specific Son Controls

VARIABLES	Value	value
Total Finish 1	4.03146e+06*	6.27969e+06***
	(0.065)	(0.000)
Total Finish 2-5	1.47867e+06***	1.96444e+06***
	(0.004)	(0.000)
Total Finish 6-10	1.58047e+06***	1.73451e+06***
	(0.002)	(0.001)
Other Finish	194293.00365	171359.77683
	(0.236)	(0.297)
Total DNF Non-Crash	-8.85332e+05	-8.30543e+05
	(0.131)	(0.169)
Total DNF Crash	-9,307.36992	45,216.19372
	(0.991)	(0.956)
Total Laps Led	17,720.01173**	
	(0.044)	
Experience	1.72623e+06***	1.80494e+06***
	(0.005)	(0.003)
Experience Squared	-54356.87357***	-57023.50757***
	(0.006)	(0.004)
Bobby Hamilton Jr.	-5.03848e+06	-4.93910e+06
	(0.275)	(0.282)
Chad Little	2.39674e+06	2.20431e+06
	(0.619)	(0.656)
Dale Earnhardt Jr	1.05388e+08***	1.07735e+08***
	(0.000)	(0.000)
Dale Jarrett	1.80070e+07**	1.44996e+07*
	(0.030)	(0.099)
Johnny Hamilton Jr.	1.36538e+07	1.18170e+07
	(0.105)	(0.164)
Kyle Petty	-4.31552e+06	-4.02597e+06
	(0.345)	(0.375)
Larry Foyt	3.53877e+06	3.80139e+06
	(0.445)	(0.419)
Sterling Marlin	-5.02578e+05	-2.32102e+05
	(0.928)	(0.966)
Year Fixed Effects	Yes	Yes
Constant	-1.61318e+07**	-1.61174e+07**
	(0.026)	(0.028)
H_0: Homoscedasticity	25.79***	39.57***
Observations	305	305
R-squared	0.708	0.701
Robust p-values in parentheses. Test for heteroscedasticity is a Cook-Weisberg test distributed Chi-squared with one degree of freedom. *** p<0.01, ** p<0.05, * p<0.1		

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